

53262. OCHROMA LAGOPUS Swartz. Bombacaceæ.**Balsa.**

From Camaguey, Cuba. Seeds presented by John R. Johnson, through Dr. R. L. Luaces, director, Granja Escuela. Received May 9, 1921.

"I believe that this tree will produce very well at Miami, for the flowers form during March." (*Luaces*.)

A West Indian tree 18 meters high with brown tomentose to nearly glabrous, obscurely 3 to 5 lobed leaves 15 to 20 centimeters long, and yellowish white flowers 10 centimeters long. The utilization of the wood of *Ochroma* has brought that genus into prominence during the last few years. The manufacture of buoyancy and insulation products, such as life rafts, refrigerators, and parts of lifeboats and airplanes, especially in connection with the war, has become very extensive. Eighty thousand floats made of balsa wood were used in constructing the 250-mile submarine mine barrage in the North Sea; war vessels as well as transports were in so far as possible equipped with balsa life rafts and lifeboats; and special refrigerating trucks with balsa as the insulating material were used in France. The wood of the trees of this genus is the most notable among light-weight woods. It is generally known in Spanish America as "balsa," and that word has been transferred to and is in general use in the United States. Balsa is the Spanish word for raft, and it was applied to this tree because the Spanish colonists, when they migrated to the New World, found it in use by the natives for rafts.

Balsa is a very common and conspicuous tree in tropical America. It is distinguished not only by its light soft wood, but also by its large simple leaves, large solitary flowers, and very conspicuous fruit, which is not unlike a cotton boll on a large scale. When the fruit is matured, but has not finally burst, it looks much like a rabbit's foot and presumably from this the first species of *Ochroma* to be described received the specific name "lagopus." When the fruit finally bursts and the mass of down falls to the earth, it suggests the fur of a rabbit. The seeds are enveloped in this fur and are disseminated by it. They resemble small grape seeds and, unlike cotton, the "down" is not firmly and permanently attached to the seed.

The species of this genus most frequently occur in the lowlands and foothills, though rarely, if ever, where the soil is at all affected by brackish or salt water. They have not been discovered in the higher altitudes, that is, at more than 1,000 meters above sea level.

Balsa is usually a second-growth tree, though it does occur as an isolated tree in the primeval forest. It appears promptly and abundantly where clearings have been made by natural agencies, such as floods and fires, or by human cultivations. In this respect it might properly be called a tree "weed." The natural seeding in some places produces such an abundance of young plants as to suggest weeds in a neglected garden. The tree's growth is very rapid. In the natural state the wood is very perishable. One rarely sees the remains of trees of balsa in the tropical forests. They decay with apparently the same rapidity as a cotton fabric; the wood absorbs moisture readily and shrinks and warps badly. This is due undoubtedly to the feeble lignification of the cell walls and to the lack of aseptic properties such as the timber of oak and pine possess. It was only when engineers, after protracted investigation and experiments, overcame these defects that the wood could be fabricated into valuable products. (Adapted from *Journal of the Washington Academy of Sciences*, vol. 9, p. 157.)

For previous introduction, see S. P. I. No. 47593.

53263 to 53266. GOSSYPIMUM BARBADENSE L. Malvaceæ. Cotton.

From Gizeh, Egypt. Seeds presented by T. Trought, botanist, Ministry of Agriculture. Received May 4, 1921. Quoted notes by Mr. Trought.

53263. "*Ashmouni*, second grade, selected."

For previous introduction, see S. P. I. No. 7030.

53264. "*Doumains Assili*."

53266. "*Zagora*."

53265. "*Doumains Sakel*."